1	2	3
6. Jadavpur University, Calcutta	8	2
7. Indian Institute of Technology, New Delhi	20	3
8. Indian Institute of Technology, Kharagpur	10	1
9. Indian Institute of Technology, Bombay	10	Nil
10. All India Institute of Medical Sciences, New Delhi	6	Nil
11. Indian Veterinary Research Institute, Izatnagar	15	1
12. Indian Agricultural Research Institute, New Delhi.	6	Information available only for all M.Sc. and Ph. D. courses taken together (140/611)
13. Assam Agricultural University, Jorhat	10	Nil
14. Tamil Nadu Agricultural University, Coimbatore.	10	2
15. G. B. Pant University of Agriculture & Technology, Pantnagar.	10	Nil
16. Goa University, Goa	10	Nil

Recommendations of WHO on Mosquito Control

2504. SHRI RAM AWADHESH SINGH: Will the Minister of HEALTH AND FIMILY WELFARE be pleased to state:

(a) whether Government are aware of the meeting of the World Health Organisation (WHO) held in Geneva in April, 1989 on Vector Control as reported in the Indian Express dated 2nd May, 1989;

(b) what new methods of mosquito control were suggested in this meeting;

(c) what are the most effective and safe pesticides, recommended at this meeting; and

(d) whether Government propose to review the case of spraying for malaria control due to its doubtful efficacy and problem of resistance in vectors?

THE MINISTER OF STATE OF THE MINISTRY OF HEALTH AND FAMILY WELFARE (SHRI RAFIQUE ALAM): (a) to (c) Yes. The WHO Expert Committee on Equipment for Vector Control was held at Geneva from 4—11 April, 1989. It was not attended by India as it is not a member of the Expert Committee. The Committee, however, made certain recommendations, which are given in the statemtnt (*See* below).

(d) Government reviews the impact of spray operations and vector resistance regularly and alternative insecticides are used whenever vector resistance is noticed.

Statement

Recommendations of the Expert Committee on Equipment for Vector Control

The following recommendations were approved by the Committee:—

1. Vector control programmes should integrate all available methods emphasizing equipment for more accurate and selective application of pestlcide so that fish and other biological agents can be more effectively used.

2. Considering the present policy of WHO in the promotion of appropriate technology community participation and intersectorial coordination in health programmes, there is an increased need for light-weight, simple and durable equipment which is safe to operate. In particular there is a need for small and standard compression sprayers portable aerosol generators, and improved knapsack mist-blowers together with evaluation or nozils moulded in engineering plastics and development of more reliable pressure regulation. Specifications for the smaller types of sprayers suitable for small communities and individual householders need to be developed to assist purchasing auhorities with selection of appropriate equipment.

3. Emphasis is needed on more selective application of insecticides, such as treatment of bednets, trapa and screens, where these techniques fit in with socio-economic factors and the biology of the vector.

4. The equipment evaluation collaborating centres set up by WHO should continue to be supported, with emphasis on evaluating small-scale equipment, including machines manufactured in developed countries. Additional evaluation centres should be established in regions not yet represented to increase studies for operational performance of equipment in field use. The evaluating centres should be encouraged to maintain information interchange through meetings and a newsletter that should be distributed more widely to provide information on pesticide application equipment to the end-users. The evaluation centres should develop a system for advising control managers on the selection of pesticide application equipment and treatments for specific problems. Research is also needed at these Centres to develop new equipment to optimize atomisation and droplet deposition, and reduce contamination by operator.

5. In view of world-wide concern about the use of chloroflurocarbons (CFC) affecting the ozone layer, industry should be encouraged to develop alternative propellants for use in pressure packs and investigate innovative techniques of producing aerosols for disinsection of aircraft and other purposes.

6. Disease vector and pest control programmes should include environmental management as a component in their integrated strategies whenever justified. National experts should utilize available technical publications on environmental management to assist community leaders to produce training materials relevant to a particular area. Community based environmental management programme should maximize the use of local resources such as agricultural tools and equipment, and training materials should be produced with advice, from people with appropriate field experience, Simple textbooks and educational materials should be prepared for schools and community use. Selection of heavy equipment for coastal management, large drainage works and canal maintenance should be based on extensive field comparisons of a wide array of available equipment.

7. Considering the importance of environmental management and the need to improve use and maintenance of pesticide application equipment in vector control programmes, engineers are needed in WHO disease vector control programmes to assist WHO regional offices in training programmes and evaluation of field use of equipment.

8. Sources of equipment with a current list of public and private organizations having equipment and capability for vector control use in emergency programmes need to be

identified in each area where epidemics are most likely to occur. Encouragement should be given to such regional organizations to refine remove sensing techniques to assist in planning of control measures in epidemics. Closer collaboration is needed between WHO and other international organizations, especially FAO, UNICEF, UNFP, etc. to assist standardization of supplies and spare parts, where applicable, through the Inter Agency Procurement Services Unit (IAPSU). In general equipment should be supplied with sufficient spare parts to operate equipment effectively for at least one year.

9. The appropriateness of aerial spraying as opposed to alternative methods of control, especially its effect on the environment, should be carefully considered. Recognizing the importance of large scale treatments in vector control programmes such as the tsetse and onchcerciasis programmes continued research is needed to unprove atomisation for adulticiding and larviciding from aircraft, and develop accurate track guidance systems for small aircraft.

10. Training should be promoted at regional and national levels and the production of improved instructions manuals and other visual aids, such as slides and videods hould be encouraged to assist in training programmes that can be easily adapted to different language and socio-economic needs.

11. Continued emphasis is needed on training manegers at community level vector control programmes and in maintenance of equipment, with a system developed for supervising application of pesticides. the Committee recomended that the formal training and certification in the safe handling and management of pesticides and related pesticide application equipment should be made mandatory for all operators in the vector control programmes of Member Countries. Continuation of Inter-countries and regional training seminars for managers and other personnel in vector control should be encouraged.

मैसर्स अग्रवाल कोल्ड ड्रिन्क्स, ब्रह्मपुरी, दिल्ली द्वारा मृदु पेयों की सप्लाई

2505. **श्री सुनील कुमार पट्टनायक :** क्या स्वास्थ्य और परिवार कल्याण मंत्री यह बताने की कृपा करेंगे कि :

(क) क्या यह सच है कि गत कई वर्षों से दिल्ली में मैसर्स अग्रवाल कोल्ड ड्रिन्क्स चौहान बाजार, मेन रोड, ब्रह्मपुरी साधारण दुकानदारों तथा आस-पास के निवासियों को जाली ट्रेड मार्क के मृदु पेयों की सप्लाई करने के अवध व्यापार में लगा हुआ है और इसके कारण कई बीमारियों के साथ-साथ वहां पर हैजे के फैलने का खतरा उत्पन्न हो रहा है;

(ख) यदि हां, तो क्या सरकार इसकी रोकथाम करने का विचार रखती है, और यदि नहीं तो क्या इसकी केन्द्रीय जांच ब्यूरो से जांच कराए जाने का कोई प्रस्ताव है ; और

(ग) यदि हां, तो कब तक और यदि नहीं तो इसके क्या कारण हैं ?

स्वास्थ्य और परिवार कल्याण मंत्रालय के राज्य मंत्री (श्री रफीक आलम) : (क) से (ग) खाद्य अपमिश्रण निवारण विभाग, दिल्ली प्रशासन द्वारा उपलब्ध की गई सूचना के अनुसार, उन्हें मैसर्स अग्रवाल एजेंसी, डी-23/5, मेन रोड ब्रह्मपुरी, शाहदरा, दिल्ली के खिलाफ बनावटी पेय पदार्थों की बिक्री के बारे में कोई शिकायत प्राप्त नहीं हुई । दिल्ली प्रशासन के खाद्य निरीक्षकों द्वारा उपर्युक्त व्यापारी से वातित जल के 2 नमूने उठाए गए और